

SPEECH

OF

MR. BINGHAM, OF MICHIGAN,

AGAINST THE

BILL FOR THE EXTENSION OF THE PATENT TO  
THE REPRESENTATIVES OF JETHRO WOOD.

DELIVERED

IN THE HOUSE OF REPRESENTATIVES, FRIDAY, AUGUST 30, 1850

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## THE CAST-IRON PLOUGH.

The bill for the relief of the heirs of Jethro Wood, being under consideration, and the question being upon its engrossment, after remarks by Mr. HARLAN, of Indiana, in favor of the bill,

Mr. BINGHAM said: Mr. Speaker, Jethro Wood obtained a patent for the construction of a cast-iron plough, in the year 1819. At its expiration it was extended to him for an additional period of fourteen years, by act of Congress, making, in the whole, twenty-eight years of exclusive monopoly conferred upon him. This bill proposes to extend the patent to his heirs for an additional period of seven years, and to confer upon them the power "to demand and receive twenty-five cents for each plough for licenses to construct ploughs according to said invention." The petition upon which the committee who reported this bill have acted, alleges, that Jethro Wood, of Cayuga county, in the State of New York, instituted, at a great expense, a series of experiments, for the purpose of improving the plough; and after devoting six years to the subject, succeeded, in 1819, in inventing a very useful and valuable instrument; that he spent year after year in perfecting the mould-board, and finally invented "a very delicate and peculiar construction of the mould-board, which has, during a period of thirty years and upwards, been confessedly perfect and unexcelled;" that he invented a light cast-iron share or cutting edge, nicely adjusted and fastened to the mould-board, and the further improvement of a cast-iron standard, a cast-iron land-side, and fastenings of the handles, the mould-board, the beam, the plough-share, and the land-side, so simple, cheap, and strong, that every one of these improvements is found in use in "every plough on either side of the Atlantic."

The committee, in their report accompanying this bill, say, "that in 1812, Jethro Wood commenced experiments in the construction of a cast-iron plough, and after five years of labor he com-

pleted it." The extraordinary assumptions of the petitioners, the admission of the Committee on Patents who reported this bill, and a decision which is said to have been obtained in the circuit court of the United States, warrant the belief that it is intended to confer upon these persons the exclusive control and monopoly of the cast-iron plough, to tax the most important and useful implement of agriculture, and to lay the four million of farmers in the United States under tribute for seven years to the heirs of Jethro Wood. The Constitution of the United States confers upon Congress the "power of securing, for limited times, to authors and inventors, the exclusive right to their respective writings and discoveries;" and waiving for the present the question of the propriety or expediency of renewing, by special act, for a second time, this patent, I propose to examine into the merits of this claim to originality in the construction of a cast-iron plough. What did Jethro Wood invent? What has he done which entitles him, and his heirs after him, to a contribution from every farmer in the land, for the next seven years? He claims to have invented the making of a plough of cast-iron. I pronounce that claim entirely unfounded; and I ask the attention of this House to the authorities I shall produce.

Here, sir, is the Edinburgh Encyclopædia, with the plates, which are copied from Rees's Encyclopædia, and published before the year 1800. From this it appears that in the year 1742, a patent was granted in Great Britain to James Small, a Scotchman, for an improvement in the plough upon mathematical principles. The mould-board of this plough was made of cast-iron. Here are the plates of this plough, [holding up the book,] to which I invite an examination, invented more than a hundred years ago. Mr. Small was extensively engaged in the manufacture of ploughs in Berwickshire, Scotland, for a great number of years; and we are told that his ploughs are still consid-



ered a standard for the elements of good plough-making, notwithstanding the improvements since his death, up to the present day. Jethro Wood had access, or might have had access, to this book—access to these plates and drawings. All the agricultural works of that day gave a minute description of the cast-iron plough, and this claim to originality, in making a plough of cast-iron, is perfectly absurd.

Mr. Small, who conceived the original idea of *casting* the plough, and in giving a more perfect shape to the *mould-board*, did not make the share, or land-side, of cast-iron. But the claim of Jethro Wood to originality in either of those particulars is equally false and unfounded. An inspection of these plates in the *Edinburgh Encyclopædia*, shows that Small's plough had a cast-iron standard, cast as part of the mould-board. In 1785, Robert Ransome, of Ipswich, England, introduced the cast-iron share or point, and for this important improvement he obtained a patent. Soon after that, it appears that a plain farmer in Suffolk county, England, by the name of Bright, conceived the idea of making the bottom of the *land-side* of cast-iron; this was made with mortices to receive the tenons of the wood to which it was attached. This was soon followed up by Mr. Ransome making the entire plough, standard share, and land-side of cast-iron. So it will be seen that this invention, and every part of it, is entirely of English origin, all brought out to the light of the world in the last century, and that unless these books are false, unless we deny the statements of these agricultural works, we must pronounce the claim of Jethro Wood to originality in the construction of the cast-iron plough, or any part of it, entirely unfounded. To prevent the rapid wear of the cast-iron exposed to the friction of the earth, in 1803 Mr. Ransome invented and took out a patent for *case hardening* the land-side or share, a process which is termed, in this country, *chilling*, and which makes the iron very hard.

The peculiar shape and construction of the mould-board of a plough, so that the earth shall be penetrated with the least resistance, and turned over in proper form, depend much upon the nature and character of the soil, and is susceptible of demonstration upon purely mathematical principles. The attention of learned and scientific men was directed to the solution of this question long before Jethro Wood's day. In 1798 Thomas Jefferson, of Virginia, late President of the United States, who was as much in advance of his time in the science of agriculture as he was in the science of government, took up the *plough* with a view to scientific improvement. He invented a *mould-board*

an account of which he first gave to the French Institute, and described minutely in a letter to Sir John Sinclair, declaring the object which he desired to obtain was "the forming of the mould-board in such a manner as to turn over the sod with the least possible resistance." So it seems that this claim of Jethro Wood to a "very delicate and peculiar construction of the mould-board," must yield, like all his other pretensions, to the scientific investigations of the learned men who preceded him by many years.

But, Mr. Speaker, Jethro Wood is not even entitled to the merit of being the first to introduce the cast-iron plough into the United States. That honor belongs to Charles Newbold, an ingenious farmer of Burlington, New Jersey, who, as early as 1796, made and used the cast-iron plough, which he patented in 1797. From the transactions of the society of New York for the promotion of agriculture, which was published in 1801, it appears that cast-iron ploughs were kept for sale by Mr. Peter T. Curtenius, in the city of New York, in the year 1800, which were highly approved. In the year 1807 Mr. Peacock, of New Jersey, improved and patented a cast-iron plough, which was extensively used in New York and New Jersey. In 1808 Richard B. Chenowith, of Maryland, patented a plough of cast-iron, which was introduced into general use. And the records of the Patent Office show that twenty-five ploughs were patented prior to the date of Jethro Wood's patent in 1814. On the 10th day of August of the present year, I have the statement of the Commissioner that three hundred and fifty-nine patents had been granted for ploughs. Of those three hundred and fifty-nine men many of them have devoted more time, and labor, and money, and scientific investigation, to the improvement of the plough than did Jethro Wood.

In the transactions of the New York State Agricultural Society for 1846, is an able article upon "The improvement of the plough in the United States," to the author of which, Mr. A. B. Allen, who was formerly a scientific and practical agriculturist near the city of Buffalo, and now the editor of an agricultural journal in the city of New York, I am indebted for many of the facts which I have stated. In this article the author refers particularly to Edwin A. Stevens, of Hoboken, New Jersey, who devoted years to its improvement. He continued experimenting until he succeeded in making a plough so perfect in its shape as to offer the least possible resistance, and capable of being propelled by the least motive power. He took his idea of a cast-iron plough from Mr. Newbold's invention, and he was the first in this country to make use of the process of *cold chilling*



for the base of the land-side and lower edge of the share, which greatly increases their durability, and is an important improvement for the farmer. Mr. Davis, of the District of Columbia, Mr. Bergen, of Long Island, in New York, and Mr. Nourse, of Massachusetts, are also particularly mentioned as entitled to praise, for having introduced improvements in the cast-iron plough for particular soils and particular purposes, and I also take pleasure in adding, that several valuable and important improvements have been made by citizens of Michigan, Wisconsin, and other western States, in adapting the plough to their peculiar soils and localities. But, Mr. Speaker, these inventions of the last century, and these patents for improvements, have all expired, and the cast-iron plough has become the common property of the world. The plough of the present day is a combination of improvements of hundreds of men, each entitled to more or less credit for furnishing facilities for their introduction into the various portions of the country, and for their being brought into general use.

This bill proposes to single out a particular individual from amongst a great number of public benefactors, and to confer peculiar privileges which are granted to no others. It proposes to restrain the free use of the plough. It proposes to send the tax-gatherer throughout the length and breadth of the land, for the next seven years. It proposes to give the heirs of Jethro Wood the power to *plunder* the people, to harass them, to involve them in litigation, and to wrest from their hard earnings millions of money. Ploughs are now manufactured with great facility, with great cheapness, and in great quantities. I have entered into a correspondence with various plough manufacturers in Baltimore, New York, Massachusetts, and Michigan, as to the number of ploughs annually manufactured in the United States, and they concur in the opinion that not less than two millions in number are annually produced. From the city of New York alone fifty thousand are annually sent into the southern States, and I am told that many of the southern planters purchase from fifty to one hundred every year. In the State of Michigan, where it is believed more land is cultivated in proportion to the population than any other State or portion of the globe, it is estimated that fifty thousand are annually manufactured and sold. The prices of ploughs which, while monopolies existed, were from ten to twenty dollars each, are now reduced to from two to five or six dollars, and they are constantly becoming cheaper.

Sir, the tax of a quarter of a dollar upon each plough which this bill proposes to levy, would be enormous. Reducing the estimate on half, and

taking the number at one million a year, a quarter of a dollar each, imposes upon the earnings of agriculture, the annual sum of two hundred and fifty thousand dollars, and in seven years, the sum of one million seven hundred and fifty thousand dollars, estimating the number of ploughs at two millions annually, and you have in seven years an aggregate of three millions and a half of dollars. Sir, is it any wonder that these beautiful and interesting young ladies, the heirs of Jethro Wood, should have thronged the Halls of Congress for the last three years? Is it any wonder that they should have sought, in private interviews with every member of this House, an opportunity to tell their pitious tale, and to implore, only as a woman can implore, the support of every member to this extraordinary bill? Is it any wonder that the bachelor members of this House should have become deeply interested in favor of its passage? All this may not be a matter of wonder. But to me it is a matter of surprise, that the Committee on Patents in this House, like the unjust judge in the Scripture, should have listened to the importunities of these women, and instead of investigating the merits of this claim, have consented to report a bill, which, if it become a law, will involve my constituents and the country in consequences of the most serious detriment and disaster. Sir, if instead of bestowing a willing and credulous ear to their urgent and pertinacious solicitations, they had examined the files of the Patent Office, they would have there found the written opinion of Edmund Burke, late Commissioner of Patents, which I am sure, to any unprejudiced mind, would be satisfactory and conclusive against the merits of this claim. I have procured a copy of that opinion, which I ask to have read for the information of this House and of the country.

UNITED STATES PATENT OFFICE,  
February 5, 1848.

SIR: I have received your letter of the 31st ultimo, requesting my views in relation to the patent of Jethro Wood, for a cast-iron plough, and such facts respecting it as I may deem important in reference to their bearing upon the bill, now before Congress, for its extension; and in reply I have the honor to state—

That the patentee and his legal representatives have already had the benefit of a term of twenty-eight years, the patent having been originally granted for the term of fourteen years, and extended for another term of equal duration, making twenty-eight years in the whole. If the invention of Mr. Wood has any merit, it would seem that twenty-eight years would be ample time to enable the inventor to remunerate himself, and make a handsome profit upon his invention; and especially should he have thus rewarded himself by the enjoyment of the exclusive monopoly of the sale of an implement so simple as the plough, of such universal demand, and of such comparatively cheap construction.

I will next inquire into the actual merits of Mr. Wood's invention. It has been very generally represented (and I once labored under that impression) that Jethro Wood was



the inventor of the cast-iron plough, and had therefore made a radical and most valuable change in the material of which that agricultural implement was constructed. This is not, however, the fact. Ploughs were constructed of cast-iron long before Mr. Wood's invention. Even so far back as 1764, cast-iron ploughs were made in Scotland. It was called the "Scotch plough," and was invented by a man by the name of Small. It is described in Loudon's *Encyclopædia of Agriculture*, paragraph 2600. In speaking of Small's plough, Mr. Loudon says: "This ingenious mechanic formed the mould-board upon *distinct* and intelligible principles, and afterwards made it of cast-iron." He further says, that Small's plough was afterwards varied a little in some parts of Scotland, and he adds, that since 1810, "*this plough has been very generally made entirely of iron.*" Thus it appears that Mr. Wood has no just claim to the original invention of the cast-iron plough, it having been constructed of that material, in part or in whole, more than half a century before the invention of his plough.

It should be remembered, that there is much confusion in the specification and claims of Mr. Wood's patent, but he appears to have claimed the original use of cast-iron in the construction of his plough, and also to have constructed his mould-board upon mathematical principles.

The form of his mould-board seems also not to have been new. Loudon, in the 2599th paragraph of the work before quoted, says that a person by the name of Lummis "first attempted its construction upon mathematical principles, which he learned in Holland," but, after obtaining his patent, he kept a knowledge of those principles from the public. Afterwards one Pochley, having a knowledge of those principles, constructed upon them a vast number of ploughs.

In continuing his comments upon ploughs constructed on mathematical principles Loudon copies the following from the "*Communications to the Board of Agriculture*, vol. 6, page 437:" "At length the Americans having obtained a knowledge of those principles either from Britain or Holland, claimed the priority of invention, in consequence of which President Jefferson of the United States presented the principles for the construction of a mould-board, first to the Institute of France, and next to the Board of Agriculture in England, as a wonderful discovery in mathematics!"

Now, as mathematical principles cannot vary, the ploughs above-mentioned, constructed on those principles, must have been the same as that claimed by Mr. Wood. And inasmuch as ploughs constructed on those principles were known in this country during the presidency of Mr. Jefferson, Mr. Wood could not, in my opinion, justly claim that he first introduced them here, much less could he justly claim their invention. And, of course, his representatives can set up no such pretence in support of their application for a second extension of his patent.

But the plough has, probably, some merits; not more, however, than very many others that have been before and since patented. It has by no means merits which should entitle its inventor to an exclusive monopoly of its sale and use for *forty-two* or even twenty-eight years.

In view of the fact that the improvements of the plough invented by Jethro Wood have not preëminent merits to entitle the inventor to uncommon favor, and also in view of the fact that Mr. Wood and his representatives have already enjoyed a monopoly of his invention during the period of twenty-eight years, a period twice as long as the usual term fixed by law for the duration of patents, I am clearly of the opinion that justice to the inventor does not require a further extension of his patent.

The plough is an implement of universal use in agriculture, and absolutely necessary in the present stage of advancement in that art; and, as you are well aware, it is now almost universally constructed of cast-iron, with mould-boards shaped upon mathematical principles. What, then, would be the effect of an extension of Mr. Jethro Wood's patent upon the interests of agriculture in this country, taking it for granted that the validity of the patent can be sustained? It would enable the legal representatives of the

inventor to levy a tax of *millions of dollars* upon the farmers of the United States during the term for which it is proposed to extend it. In my opinion the farming interest has already been sufficiently taxed by this patent, and it would be an act of injustice to burden it again for another period of fourteen years, or for any length of time.

I enclose you a copy of an assignment by the executor of Wood to Edward B. Morgan, conveying one fourth part of the interest in the extended term in consideration of money advanced to procure from Congress the extension of the patent which is now sought. This consideration should, of course, have its due weight in determining the expediency of granting the extension prayed for by the parties interested.

Since writing the above, I have had placed in my hands a letter addressed by A. B. Allen, Esq., editor of an agricultural paper published in the city of New York, to the Hon. Dixon H. Lewis of the United States Senate, in which he confirms my own views in regard to the novelty of Wood's invention, and satisfies me that there is very little merit in it. It is doubtful if Wood invented anything about the plough which was patentable. I have examined Ransome's work referred to by Mr. Allen, and find Mr. Allen completely sustained in his assertion, that the alleged invention of Wood was known in England and Scotland long before he pretended to make it. Indeed, there are numerous authorities in the library of this office which establish the same fact.

I have the honor to be, very respectfully, your obedient servant, EDMUND BURKE, *Commissioner of Patents.*

Hon. J. E. BRADY, *House of Representatives.*

This, sir, is the able, clear, and emphatic opinion of the head of the Patent Office, when these women first sought the power of Congress to enable them to oppress the people. Has any one undertaken to controvert that opinion? Will any member of the committee who reported this bill undertake to dispute its facts, its reasonings, or its conclusions? If they will not—if they *cannot*—why should they undertake to push this bill through with such hot haste? Mr. Speaker, have the farmers of the United States no Representatives here? Is there no one here to guard their rights, to protect their interests, to defend them against oppression and taxation? Sir, I can tell the lawyers in this House, who have yielded to the pressing and constant solicitations of these women, that their constituents will hold them to a strict account for any vote which they may give which lays a heavy hand upon the implements or the occupation of the farmer.

THE PLOUGH IS FREE, and a unanimous voice will be heard against fettering it, by any system of monopoly or taxation. These applicants assert that Jethro Wood was involved in constant litigation through the whole twenty-eight years that he had the exclusive control of his patent. Sir, the reason is obvious. He claimed too much. He undertook to monopolize over this entire country the *cast-iron plough*. He denounced the other three hundred and fifty-nine patentees for improvements in the plough as innovators and pirates. He undertook to force them to pay tribute to him, or to deprive them of the right of casting ploughs; and ever since that decision before Judge Nelson,



to which the gentleman from Indiana [Mr. HARLAN] referred, his heirs and assignees have been levying black-mail, upon the manufacturers of ploughs all over the country. If they resisted, they have been threatened with litigation and harassed with suits.

No wonder that he should have involved himself in lawsuits. No wonder that an intelligent community should have resisted so monstrous a claim. Sir, pass this bill, which holds out such tempting hopes of gain to these young ladies and their assignees, and the whole country will be involved in litigation. An intelligent community will inquire into the merits of Jethro Wood's invention, and they will submit to no exactions or any restraints upon the free use of the cast-iron plough. I am therefore opposed to the passage of this bill.

Before Mr. B. had concluded—

Mr. SILVESTER interposed, and inquired if the morning hour had not expired?

The SPEAKER stated that the morning hour had not yet commenced, and would not until private business was disposed of.

Mr. BINGHAM. Mr. Speaker, if any further proof were necessary to satisfy this House [of the

gross injustice which would be imposed upon the farmers of the country by the passage of this bill, I subjoin the following resolutions of the New York State Agricultural Society:

"Whereas a bill has recently passed the United States Senate, renewing, for the term of seven years, the patent of Jethro Wood, for improvements in the cast-iron plough, and imposing a tax of fifty cents on every cast-iron plough manufactured in the United States during that time; and whereas for the following reasons such an act would be manifestly improper and unjust, viz:—1st, That the patent of Jethro Wood has, as we are informed, almost entirely passed out of the hands of his heirs, and is now mostly held by persons who have conferred no particular benefits and have therefore no special claims on the public; and 2d. That the improvements originated or formerly claimed by said Wood are now in many instances combined with other or later improvements, which have rendered the plough much more perfect than it could be made on the basis of his invention alone: Therefore,

"Resolved, That in the opinion of this society, the patent of Jethro Wood ought not to be renewed; he having enjoyed, in the period of twenty-eight years, for which his patent has been granted, a full equivalent for every improvement that may have been made by him in the cast-iron plough.

"Resolved, That in the opinion of this society, the passage of such a bill into a law, would be an act of gross injustice to the farmers and planters of the United States.

"Resolved, That this society respectfully but earnestly tenders to the Congress of the United States, its remonstrance against the passage of the bill renewing the patent of Jethro Wood.

B. P. JOHNSON, *Secretary.*"

NOTE.—After further debate the bill was lost by a vote of 95 to 76.

